## WHAT IS CLAIMED IS:

1. Compound represented by the formula:

$$\mathbb{R}^5$$
 $\mathbb{R}^5$ 
 $\mathbb{R}^1$ 
 $\mathbb{R}^2$ 
 $\mathbb{R}^2$ 
 $\mathbb{R}^3$ 
 $\mathbb{R}^4$ 

5

or a pharmaceutically acceptable salt, prodrug or ester thereof, wherein n and t each independently represent 0, 1 or 2;

10

15

R1 represents hydrogen, alkyl of 1-5 carbon atoms, alkenyl of 2-5 carbon atoms, alkynyl of 2-5 carbon atoms, hydroxyalkyl of 1-3 carbon atoms, alkoxyalkyl of 1-3 alkyl and 1-3 alkoxy carbon atoms, cyanoalkyl of 1-3 alkyl carbon atoms, -CH2CONH2, -CH2CH2CONH2, -CH2S(O)2NH2, -CH2SCH3, -CH2S(O)CH3 or -CH2S(O)2CH3 radicals;

R<sup>2</sup> represents radicals of alkyl of 1-5 carbon atoms, aralkyl of 1-3 alkyl carbon atoms, alkylthioalkyl of 1-3 alkyl carbon atoms, arylthioalkyl of 1-3 alkyl carbon atoms or cycloalkylalkyl of 1-3 alkyl carbon atoms and 3-6 ring member carbon atoms;

25 R<sup>3</sup> represents radicals of alkyl radical of 1-5 carbon atoms, cycloalkyl of 5-8 ring members or cycloalkylmethyl radical of 3-6 ring members;

R4 represents benzo fused 5 to 6 ring member heteroaryl 30 or benzo fused 5 to 6 ring member heterocyclo radicals, or a radical of the formula

$$\sum_{B}^{A} R^{\epsilon}$$

5

15

20

25

30

wherein A and B each independently represent O, S, SO or  $SO_2$ ;  $R^6$  represents deuterium, alkyl of 1-5 carbon atoms, fluoro or chloro radicals;  $R^7$  represents hydrogen, deuterium, methyl, fluoro or chloro radicals; or a radical of the formula

$$\mathbb{Z}_{\mathbb{N}}^{\mathbb{Z}}$$
  $\mathbb{R}^{9}$ 

wherein Z represents O, S or NH; and  $\mathbb{R}^9$  represents a radical of formula

10 wherein Y represents O, S or NH; X represents a bond, O or  $NR^{21}$ ;

R<sup>20</sup> represents hydrogen, alkyl of 1 to 5 carbon atoms, alkenyl of 2 to 5 carbon atoms, alkynyl of 2 to 5 carbon atoms, aralkyl of 1 to 5 alkyl carbon atoms, heteroaralkyl of 5 to 6 ring members and 1 to 5 alkyl carbon atoms, heterocycloalkyl of 5 to 6 ring members and 1 to 5 alkyl carbon atoms, aminoalkyl of 2 to 5 carbon atoms, N-monosubstituted or N,N-disubstituted aminoalkyl of 2 to 5 alkyl carbon atoms wherein said substituents are radicals of alkyl of 1 to 3 carbon atoms, aralkyl of 1 to 3 alkyl carbon atoms radicals, carboxyalkyl of 1 to 5 carbon atoms, alkoxycarbonylalkyl of 1 to 5 alkyl carbon atoms, cyanoalkyl of 1 to 5 carbon atoms;

 $R^{21}$  represents hydrogen radical or alkyl radical of 1 to 3 carbon atoms; or the radical of formula  $-NR^{20}R^{21}$  represents a 5 to 6 ring member heterocyclo radical; and

 $R^{22}$  represents alkyl radical of 1 to 3 carbon atoms or  $R^{20}R^{21}N$ -alkyl radical of 1 to 3 alkyl carbon atoms; and

 $R^5$  represents an alkyl radical of 1-5 carbon atoms, alkenyl radical of 2-5 carbon atoms, alkynyl radical of 2-5 carbon atoms or aryl substituted alkyl radical of 1-5 carbon atoms.

5

15

20

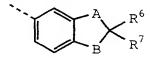
- 2. Compound of Claim 1, or a pharmaceutically acceptable salt, prodrug or ester thereof, wherein n represents 1;
- 10 t represents 1 or 2;

R<sup>1</sup> represents hydrogen radical, alkyl radical of 1-3 carbon atoms, alkenyl radical of 2-3 carbon atoms, alkynyl radical of 2-3 carbon atoms radicals or cyanomethyl;

 $R^2$  represents radicals of alkyl of 3-5 carbon atoms, arylmethyl, alkylthioalkyl of 1-3 alkyl carbon atoms, arylthiomethyl or cycloalkylmethyl of 5-6 ring member carbon atoms radicals;

R<sup>3</sup> represents alkyl of 1-5 carbon atoms, cycloalkylmethyl of 3-6 ring members, cyclohexyl or cycloheptyl radicals;

25 R4 represents 2-amino-benzothiazol-5-yl, 2-amino-benzothiazol-6-yl, benzothiazol-5-yl, benzothiazol-6-yl, benzothiazol-5-yl, benzothiazol-5-yl, benzofuran-5-yl, 1,3-benzodioxol-5-yl or 1,4-benzodioxan-6-yl radicals; or a radical of the formula



30

wherein A and B each represent O; R<sup>6</sup> represents deuterium, methyl, ethyl, propyl, isopropyl or fluoro radicals; and R<sup>7</sup> represents hydrogen, deuterium, methyl or fluoro radicals; or a radical of the formula

165

$$\mathbb{Z}_{\mathbb{N}}$$
  $\mathbb{R}^9$ 

wherein Z represents O, S or NH; and  $\mathbb{R}^9$  represents a radical of formula

5 wherein Y represents O, S or NH; X represents a bond, O or  $NR^{21}$ ;

R<sup>20</sup> represents hydrogen, alkyl of 1 to 5 carbon atoms, phenylalkyl of 1 to 3 alkyl carbon atoms, heterocycloalkyl of 5 to 6 ring members and 1 to 3 alkyl carbon atoms, or N-mono-substituted or N,N-disubstituted aminoalkyl of 2 to 3 alkyl carbon atoms wherein said substituents are alkyl radicals of 1 to 3 carbon atoms; and

- 15 R<sup>21</sup> represents hydrogen or methyl radicals; or the radical of formula -NR<sup>20</sup>R<sup>21</sup> represents pyrrolidinyl, piperidinyl, piperazinyl, 4-methylpiperazinyl, 4-benzylpiperazinyl, morpholinyl or thiamorpholinyl radicals; and
- 20 R<sup>22</sup> represents alkyl radical of 1 to 3 carbon atoms; and

R<sup>5</sup> represents an alkyl radical of 1-5 carbon atoms, alkenyl radical of 3-4 carbon atoms, alkynyl radical of 3-4 carbon atoms or aryl substituted alkyl radical of 1-4 carbon atoms.

- 3. Compound of Claim 2, or a pharmaceutically acceptable salt, prodrug or ester thereof, wherein
- R<sup>1</sup> represents hydrogen, methyl, ethyl or cyanomethyl radicals;

 $R^2$  represents isobutyl, n-butyl,  $CH_3SCH_2CH_2-$ , phenylthiomethyl, (2-naphthylthio)methyl, benzyl, 4-

methoxyphenylmethyl, 4-hydroxyphenylmethyl, 4-fluorophenylmethyl or cyclohexylmethyl radicals;

R<sup>3</sup> represents propyl, isoamyl, isobutyl, butyl, cyclohexyl, cycloheptyl, cyclopentylmethyl or cyclohexylmethyl radicals; and

R4 represents benzothiazol-5-yl, benzothiazol-6-yl, benzoxazol-5-yl, 2,3-dihydrobenzofuran-5-yl, benzofuran-10 5-yl, 1,3-benzodioxol-5-yl, 2-methyl-1,3-benzodioxol-5-yl, 2,2-dideutero-1,3-benzodioxol-5-yl, 2,2-difluoro-1,3-benzodioxol-5-yl or 1,4-benzodioxan-6-yl radicals; or a radical of the formula

$$\mathbb{Z}_{\mathbb{N}}$$
  $\mathbb{R}^9$ 

15

wherein Z represents O, S or NH; and  $\mathbb{R}^9$  represents a radical of formula

$$\frac{Y}{N} \times \mathbb{R}^{20} \qquad \frac{0}{N} \times \mathbb{R}^{20} \qquad \frac{0}{N} \times \mathbb{R}^{20} \qquad \frac{0}{N} \times \mathbb{R}^{22}$$

wherein Y represents O, S or NH; X represents a bond, O or  $NR^{21}$ ;

R<sup>20</sup> represents hydrogen, methyl, ethyl, propyl, isopropyl, isobutyl, benzyl, 2-(1-pyrrolidinyl)ethyl, 2-(1-piperidinyl)ethyl, 2-(4-methylpiperazin-1-yl)ethyl, 2-(1-morpholinyl)ethyl, 2-(1-thiamorpholinyl)ethyl or 2-(N,N-dimethylamino)ethyl radicals;

R<sup>21</sup> represents a hydrogen radical; and

30

25

R<sup>22</sup> represents methyl radical; and

 $R^5$  represents an alkyl radical of 1-5 carbon atoms or phenyl substituted alkyl radical of 2-4 carbon atoms.

Hann Hills Hall Girls Half Half Half Half

Hard Street Stre

- 4. Compound of Claim 3 or a pharmaceutically acceptable salt, prodrug or ester thereof, wherein
- 5 R1 represents methyl or ethyl radicals;
  - R<sup>2</sup> represents benzyl, 4-fluorophenylmethyl or cyclohexylmethyl radicals;
- R4 represents benzothiazol-5-yl, benzothiazol-6-yl, 2,3-dihydrobenzofuran-5-yl, benzofuran-5-yl, 1,3-benzodioxol-5-yl, 2-methyl-1,3-benzodioxol-5-yl, 2,2-dimethyl-1,3-benzodioxol-5-yl, 2,2-difluoro-1,3-benzodioxol-5-yl, 1,4-benzodioxan-6-yl,
- 2-(methoxycarbonylamino)benzothiazol-6-yl or 2-(methoxycarbonylamino)benzimidazol-5-yl radicals; and

 $R^5$  represents methyl, ethyl, propyl, isopropyl or 2-phenylethyl radicals.

20

25

30

5. Compound of Claim 1 which is

N-[2R-hydroxy-3-[(2-methylpropyl)]((1,3-benzodioxol-5-yl)sulfonyl]amino]-1S-(phenylmethyl)propyl]-2S-methyl-3-(methylsulfonyl)propanamide;

N-[2R-hydroxy-3-[(2-methylpropyl)]((1,4-benzodioxan-6-yl)sulfonyl]amino]-1S-(phenylmethyl)propyl]-2S-methyl-3-(methylsulfonyl)propanamide;

N-[2R-hydroxy-3-[(2-methylpropyl)](benzothiazol-6-yl)sulfonyl]amino]-1S-(phenylmethyl)propyl]-2S-methyl-3-(methylsulfonyl)propanamide;

N-[2R-hydroxy-3-[(2-methylpropyl)](benzothiazol-5-yl)sulfonyl]amino]-1S-(phenylmethyl)propyl]-2S-methyl-3-(methylsulfonyl)propanamide; or

N-[2R-hydroxy-3-[(2-methylpropyl)](2,3-dihydrobenzofuran-5-yl)sulfonyl]amino]-1S-(phenylmethyl)propyl]-2S-methyl-3-(methylsulfonyl)propanamide.

5

- 6. Composition comprising a compound of Claim 1 and a pharmaceutically acceptable carrier.
- 7. Method of inhibiting a retroviral protease comprising administering an effective amount of a compound of Claim 1.
- 8. Method of treating a retroviral infection comprising administering an effective amount of a composition of Claim 6.
  - 9. Method of preventing replication of a retrovirus comprising administering an effective amount of a compound of Claim 1.

20

- 10. Method of preventing replication of a retrovirus in vitro comprising administering an effective amount of a compound of Claim 1.
- 25 11. Method of treating AIDS comprising administering an effective amount of a composition of Claim 6.